REMARKS/ARGUMENTS

Claim 17 (and hence Claims 19, 22-23, and 30) stands rejected under 35 U.S.C. 112, second paragraph, for not providing sufficient antecedent basis for the expression "said customer attributes". In response, the Applicant respectfully submits that the expression "customer attributes" appears in line 3 of Claim 17. This is followed by the expression "said customer attributes" in lines 5-6 of the claim. As such, sufficient antecedent basis has been provided.

Paragraphs 0021 and 0023 of the description stand objected to for containing typographical errors (i.e., "anther" rather than "another"). In response, paragraphs 0021 and 0023 have been amended to correct these typographical errors. In addition, paragraph 0022 has been amended to correct similar typographical errors.

Claims 17-23, 25-28, 30-34, 36-37, and 39-48 stand rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent No. 6,529,909 to Bowman-Amuah ("Bowman-Amuah"). In addition, Claim 38 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman-Amuah in view of United States Patent No. 6,240,411 to Thearling ("Thearling").

The Applicant notes that the Bowman-Amuah reference is a new reference not cited by the Examiner in the first through fifth Office Actions.

The Applicant respectfully submits that previously presented Claims 17 and 37 are patentable over Bowman-Amuah as this reference does not teach or suggest the subject matter of Claims 17 and 37. In addition, the Applicant submits that Claims 18-23, 25-28, 30-34, and 36, being dependent on Claim 17, and adding patentable features thereto, are also patentable. Furthermore, the Applicant submits that Claims 38-48, being dependent on Claim 37, and adding patentable features thereto, are also patentable. Accordingly, the Examiner is respectfully requested to reconsider the previously presented claims in the above listing of claims in view of the following comments.

Claim 17:

For reference, previously presented Claim 17 recites the following:

> 17. (Previously Presented) A data mining system for delivering presentations associated with data mining models, said data mining system comprising:
>
> > a repository to store said data mining models, customer attributes, and presentation definitions;
> >
> > means to edit said data mining models, said presentation definitions, and said customer attributes;
> >
> > means to generate a presentation to deliver to a customer system; wherein said means to generate includes an analytic decision engine system including model presentation services and scoring services modules; and,
> >
> > means to receive inputs from said customer system and to deliver said presentation to said customer system;
> >
> > wherein said inputs include a customer identification and a presentation definition identification;
> >
> > wherein said means to generate selects a presentation definition using said presentation definition identification and selects a customer attribute using said customer identification;
> >
> > wherein said presentation definition includes a reference to a data mining model and one or more rules;
> >
> > and,
> >
> > wherein said means to generate applies said data mining model and said one or more rules to said customer attribute to produce an outcome for display in said presentation according to a format included in said presentation definition.

On pages 4-6 of the Office Action, the Examiner cites Bowman-Amuah against Claim 17.

For reference, the selections from Bowman-Amuah cited by the Examiner against Claim 17 are as follows (context and underlining added):

"A system, method and article of manufacture are provided for translating an object attribute to and from a database value. A database is provided and a conversion process is determined for converting an object attribute to and from a database value. The conversion process is encapsulated in an attribute converter. A first object attribute is directed to the attribute converter for conversion to a first database value. A second database value is directed to the attribute converter for conversion to a second object attribute." (Col. 2, lines 20-28.)

"IT Guiding Principles **704**... G4. The Execution, Operation and Development architectures will be designed to support frequent releases of enhancements/modifications to production applications. It is imperative that companies in the current market place be able to quickly modify their business processes in order to address changes in the industry. A Netcentric architecture simplifies frequent software releases for both internal and external users of the systems." (Col. 27, line 63 to col. 28, line 40.)

"FIG. 124 illustrates multiple interfaces to an application **12400** including a handheld device **12402**, a desktop PC **12404**, and a telecommunications device **12406**...Often these user interfaces will be changed over time to fit user's changing needs. While the tasks completed by the user may not change, the interface to complete those tasks will need to. Windows users will want to move to the Web. Web users will want to move to handheld devices. The presentation code should be able to be changed without causing a rewrite of the business logic on the client...Therefore, bundle business logic executed on the client separate from the presentation logic. This new type of class is an Activity." (Col. 249, lines 25-38.)

"FIG. 125 illustrates an activity entity relationship diagram...While any user interface maintains a reference to the Activity **12500** it provides an interface **12502** for, the Activity is unaware of what (if any) interfaces exist on it. This decoupling allows for a large amount of flexibility with the interfaces to an application. Multiple types of interfaces can exist on a single type of Activity. Code is reused and none is lost if presentation logic is replaced with something different...While a user interface can communicate directly with its associated activity, an activity should never directly communicate with any of its interfaces. This would set up a dependent relationship that would reduce the flexibility of the activity...Instead, an

activity can communicate to its interfaces through an event mechanism. Interfaces are set up as dependents of the activity and the activity sends events to all of the interfaces on it. Each interface can decide how to handle the event." (Col. 249, line 53 to col. 250, line 5.)

Also, please consider the following additional selections from Bowman-Amuah which describe the figures cited by the Examiner (underlining added):

"FIG. 10 illustrates the services of a Netcentric Architecture Framework in accordance with one embodiment of the present invention;...FIG. 11 is a detailed diagram of some of the components of the Netcentric Architecture Framework found in FIG. 10..." (Col. 2, line 65 to col. 3, line 2.)

"FIG. 29 shows the major components of the reporting application framework..." (Col. 3, lines 34-35.)

"FIG. 95 illustrates a flowchart for a method for transmitting data from a server to a client via pages in accordance with an embodiment of the present invention..." (Col. 6, lines 12-14.)

"FIG. 120 illustrates the method in which a client finds and instantiates a Customer Object from a customer component..." (Col. 7, lines 20-21.)

"FIG. 123 illustrates a flowchart for a method for providing an activity module in accordance with an embodiment of the present invention... " (Col. 7, lines 26-28.)

"FIG. 125 illustrates an activity entity relationship diagram..." (Col. 7, lines 33-34.)

Also, please consider the following additional selections from Bowman-Amuah (underlining added):

"A system, method and article of manufacture are provided for translating an object attribute to and from a database value. A database is provided and a conversion process is determined

for converting an object attribute to and from a database value. The conversion process is encapsulated in an attribute converter. A first object attribute is directed to the attribute converter for conversion to a first database value. A second database value is directed to the attribute converter for conversion to a second object attribute. The second attribute converter is substituted for the attribute converter for altering the conversion of the attribute, and the attribute converter is altered for relieving a performance bottleneck." (Abstract.)

<u>First</u>: The Applicant respectfully submits that Bowman-Amuah is not directed to the subject matter of Claim 17. Claim 17 is directed to a "data mining system for delivering presentations associated with data mining models". In contrast, as recited in its abstract, Bowman-Amuah is directed to a "system…for translating an object attribute to and from a database value."

In particular, Bowman-Amuah describes a system for the development of data processing applications, such as transactional applications, accounting applications, or enterprise resource planning applications. The data held and managed by such applications in most cases forms the input for a data warehouse which then usually becomes the input for an analytical processing environment. As such, Bowman-Amuah is not directed to data mining and predictive analytics. In fact, a text search in Bowman-Amuah for the term "data mining" uncovered only one occurrence and that occurrence was in the title of a citation in the "Other Publications" section of the cover page of the reference. Bowman-Amuah specifically describes a mechanism for materializing an object in memory, where the properties of the object correspond to attributes in a row of a database table or view. Essentially, Bowman-Amuah describes a technique for addressing the "object-relational mapping problem". As such, Bowman-Amuah is not directed to data mining.

<u>Second</u>: With respect to that element of Claim 17 that recites "a repository to store said data mining models, customer attributes, and presentation definitions", the Examiner states the following on page 4 of the Office Action (underlining added):

"a repository to store said data mining models, customer attributes, and presentation definitions [see Fig. 11; in the board reasonable interpretation, the Examiner interprets said information system to include but not limited to said data mining models, customer attributes and presentation definitions, etc…];…"

The Applicant respectfully submits that FIG. 11 of Bowman-Amuah does not show the storing of data mining models in a repository. In addition, as mentioned above, the term "data mining" does not even appear in Bowman-Amuah (i.e., outside the title of a citation in the "Other Publications" section of the cover page of the reference).

As such, Bowman-Amuah does not teach or suggest that element of Claim 17 that recites: "a repository to store said data mining models, customer attributes, and presentation definitions".

Third: With respect to that element of Claim 17 that recites "means to edit said data mining models, said presentation definitions, and said customer attributes", the Examiner states the following on page 4 of the Office Action (underlining added):

"means to edit said data mining models, said presentation definitions, and said customer attributes [see col. 28, lines 34-37, regarding it is imperative that companies in the current market place be able to quickly modify their business processes in order to address changes in the industry];…"

Col. 27, line 63 to col. 28, line 40 of Bowman-Amuah, which includes the selection cited by the Examiner above, recites the following (underlining added):

"IT Guiding Principles 704… G4. The Execution, Operation and Development architectures will be designed to support frequent releases of enhancements/modifications to production applications. It is imperative that companies in the current market place be able to quickly modify their business processes in order to address changes in the industry. A Netcentric architecture simplifies frequent software releases for both internal and external users of the systems." (Col. 27, line 63 to col. 28, line 40.)

The Applicant respectfully submits that this selection from Bowman-Amuah does not teach means for editing data mining models (or presentations definitions or customer attributes). All this selection teaches is that modifying "business processes" quickly is desirable. This has nothing to do with editing data mining models.

As such, Bowman-Amuah does not teach or suggest that element of Claim 17 that recites: "means to edit said data mining models, said presentation definitions, and said customer attributes".

Fourth: With respect to those elements of Claim 17 that recite "means to generate a presentation to deliver to a customer system; wherein said means to generate includes an analytic decision engine system including model presentation services and scoring services modules", the Examiner states the following on page 4 of the Office Action (underlining added):

> "means to generate a presentation to deliver to a customer system [see Fig. 29, regarding initiating a report request from a client and distributing it among printer, screen and archive];… wherein said means to generate includes an analytic decision engine system including model presentation services and scoring services modules [see Fig. 95; in the broad reasonable interpretation, the Examiner interprets the process as said analytic decision engine];…"

FIG. 29 of Bowman-Amuah describes the architecture of a reporting engine, such as Microsoft Reporting Services or Crystal Reports. As described, these reports draw their data from a database. FIG. 95 of Bowman-Amuah refers to a mechanism for simple data retrieval from a database. There are no analytic decision processes involved. The flowchart in FIG. 95 shows a client requesting rows from a database in parts (rather than requesting all of the data in one operation). This would be done to implement a paging type of user interface, where due to display size, the user is unable to view the entire dataset at once. No "scoring services" as recited in Claim 17 are taught or suggested by FIGS. 29 or 95 of Bowman-Amuah.

As such, Bowman-Amuah does not teach or suggest that elements of Claim 17 that recite: "means to generate a presentation to deliver to a customer system; wherein said means to generate includes an

analytic decision engine system including model presentation services and scoring services modules".

Fifth: With respect to that element of Claim 17 that recites "means to receive inputs from said customer system and to deliver said presentation to said customer system", the Examiner states the following on pages 4-5 of the Office Action (underlining added):

> "means to receive inputs from said customer system and to deliver said presentation to said customer system [see Fig. 95, described *Supra*; in the broad reasonable interpretation, the Examiner interprets a client and requesting a said presentation, wherein the server prepares and transmit the presentation to the client];…"

As mentioned above, FIG. 95 of Bowman-Amuah refers to a mechanism for simple data retrieval from a database. The flowchart in FIG. 95 shows a client requesting rows from a database in parts (rather than requesting all of the data in one operation). This would be done to implement a paging type of user interface, where due to display size, the user is unable to view the entire dataset at once. No "means to receive inputs from said customer system" as recited in Claim 17 are taught or suggested by FIG. 95 of Bowman-Amuah.

As such, Bowman-Amuah does not teach or suggest that element of Claim 17 that recites: "means to receive inputs from said customer system and to deliver said presentation to said customer system".

Sixth: With respect to that element of Claim 17 that recites "wherein said inputs include a customer identification and a presentation definition identification", the Examiner states the following on page 5 of the Office Action (underlining added):

> "wherein said inputs include a customer identification [see Fig. 120, regarding a client finds and instantiates a Customer Object from a customer component] and a presentation definition identification [see Fig. 123, regarding forwarding another portion of the requests to the server for further handling purposes; in the broad reasonable interpretation, the

Examiner interprets the above as said presentation definition identification so that the system is enabled to effect changes in the presentation interface (12310)];…"

FIG. 120 of Bowman-Amuah shows a mechanism whereby a customer object is instantiated in a server computer, and a proxy customer is instantiated in a client computer, the proxy being linked to the actual object on the server. This is equivalent to the so-called "distributed objects" architecture or "remote objects architecture" popularized by DCE and CORBA. At the very most, FIG. 120 shows the selection of an object in a relational database by an identification. In contrast, according to the Applicant's invention, as recited in Claim 17, the server constructs a presentation based on customer identification and other data provided by the client and then sends the presentation to the client.

FIG. 123 of Bowman-Amuah shows that the step **12310** of "Effecting Changes In The Presentation Interface" occurs at the client (see col. 248, lines 37-45). In Bowman-Amuah, it is the client that determines changes in the interface (such as navigation) based on user interactions. In contrast, in the Applicant's invention, as recited in Claim 17, the reverse is true. The server constructs the presentation based on decisions (including those made using the analytic engine) made at the server and then sends the presentation to the client.

As such, Bowman-Amuah does not teach or suggest that element of Claim 17 that recites: "<u>wherein said inputs include a customer identification and a presentation definition identification</u>".

<u>Seventh</u>: With respect to that element of Claim 17 that recites "wherein said means to generate selects a presentation definition using said presentation definition identification and selects a customer attribute using said customer identification", the Examiner states the following on page 5 of the Office Action (underlining added):

"wherein said means to generate selects a presentation definition using said presentation definition identification [see col. 249, lines 29-35, regarding often these user interfaces will be changed over time to fit user's changing needs; While the tasks completed by the user may not change, the interface to complete those tasks will need to. Windows users will want to move to the Web; Web users will want to move to handheld devices; the presentation

code should be able to be changed without causing a rewrite of the business logic on the client; in the broad reasonable interpretation, the Examiner interprets the above as selecting said presentation definition when the user switches platforms] and selects a customer attribute using said customer identification [see Fig. 120, described *Supra*];..."

Col. 249, lines 25-38 of Bowman-Amuah, which includes the selection cited by the Examiner above, recites the following (underlining added):

"FIG. 124 illustrates multiple interfaces to an application **12400** including a handheld device **12402, a desktop PC 12404, and a telecommunications device 12406**...Often these user interfaces will be changed over time to fit user's changing needs. While the tasks completed by the user may not change, the interface to complete those tasks will need to. Windows users will want to move to the Web. Web users will want to move to handheld devices. The presentation code should be able to be changed without causing a rewrite of the business logic on the client...Therefore, bundle business logic executed on the client separate from the presentation logic. This new type of class is an Activity." (Col. 249, lines 25-38.)

FIG. 124 and the above selection from Bowman-Amuah relates to the selection of presentation type based on client type (e.g., handheld device **12402**, desktop PC **12404**, or telecommunications device **12406**). In contrast, in the Applicant's invention as recited in Claim 17, no such selection is made as the client type does not change. What changes in Claim 17 is the customer identification and/or presentation identification. From that change, a new presentation may be selected for the same client.

As mentioned above, FIG. 120 of Bowman-Amuah shows a mechanism whereby a customer object is instantiated in a server computer, and a proxy customer is instantiated in a client computer, the proxy being linked to the actual object on the server. This is equivalent to the so-called "distributed objects" architecture or "remote objects architecture" popularized by DCE and CORBA. At the very most, FIG. 120 shows the selection of an object in a relational database by an identification. In contrast, according to the Applicant's invention, as recited in Claim 17, the server constructs a presentation based on customer identification and other data provided by the client and then sends the presentation to the client.

As such, Bowman-Amuah does not teach or suggest that element of Claim 17 that recites: "wherein said means to generate selects a presentation definition using said presentation definition identification and selects a customer attribute using said customer identification".

Eighth: With respect to that element of Claim 17 that recites "wherein said presentation definition includes a reference to a data mining model and one or more rules", the Examiner states the following on pages 5-6 of the Office Action (underlining added):

> "wherein said presentation definition includes a reference to a data mining model and one or more rules [see Fig. 11, described *Supra*; also, see Fig. 125 and col. 249, lines 55-58, regarding while any user interface maintains a reference to the Activity 12500 it provides an interface 12502 for, the Activity is unaware of what (if any) interfaces exist on it; in the broad reasonable interpretation, the Examiner interprets the reference to the Activity as said data mining model; also, see col. 250, lines 4-5, regarding each interface can decide how to handle the event; in the broad reasonable interpretation, the Examiner interprets that how the event is handles is based on one or more said rules];..."

Col. 249, line 26 to col. 250, line 5 of Bowman-Amuah, which includes the selections cited by the Examiner above, recites the following (underlining added):

> "FIG. 124 illustrates multiple interfaces to an application **12400** including a handheld device **12402**, a desktop PC **12404**, and a telecommunications device **12406**...Often these user interfaces will be changed over time to fit user's changing needs. While the tasks completed by the user may not change, the interface to complete those tasks will need to. Windows users will want to move to the Web. Web users will want to move to handheld devices. The presentation code should be able to be changed without causing a rewrite of the business logic on the client...Therefore, bundle business logic executed on the client separate from the presentation logic. This new type of class is an Activity....An Activity is responsible for: managing client logical units of work maintaining client representation of a business model validation across multiple interfaces (complex business logic) error and exception handling communication with server and other services creating other Activities triggering events

intended to be 'caught' and acted on by the presentation logic…An Activity resides between the actual user interface and the business model and server components as shown in the Entity Relationship diagram below: …FIG. 125 illustrates an activity entity relationship diagram…While any user interface maintains a reference to the Activity **12500** it provides an interface **12502** for, the Activity is unaware of what (if any) interfaces exist on it. This decoupling allows for a large amount of flexibility with the interfaces to an application. Multiple types of interfaces can exist on a single type of Activity. Code is reused and none is lost if presentation logic is replaced with something different…While a user interface can communicate directly with its associated activity, an activity should never directly communicate with any of its interfaces. This would set up a dependent relationship that would reduce the flexibility of the activity…Instead, an activity can communicate to its interfaces through an event mechanism. Interfaces are set up as dependents of the activity and the activity sends events to all of the interfaces on it. Each interface can decide how to handle the event." (Col. 249, line 53 to col. 250, line 5.)

The Applicant respectfully submits that the Examiner has misread Bowman-Amuah. The Examiner says that the Activity **12500** of Bowman-Amuah is a data mining model. However, the above selection from Bowman-Amuah clearly defines the Activity **12500** as a new type of class that bundles business logic executed on the client separately from presentation logic. The Activity **12500** of Bowman-Amuah is clearly not a data mining model. In addition, it is not a reference to a data mining model.

As such, Bowman-Amuah does not teach or suggest that element of Claim 17 that recites: "wherein said presentation definition includes a reference to a data mining model and one or more rules".

Ninth: With respect to that element of Claim 17 that recites "wherein said means to generate applies said data mining model and said one or more rules to said customer attribute to produce an outcome for display in said presentation according to a format included in said presentation definition", the Examiner states the following on page 6 of the Office Action (underlining added):

"wherein said means to generate applies said data mining model and said one or more rules to said customer attribute to produce an outcome for display in said presentation according to a format included in said presentation definition [see Fig. 123, regarding forwarding another portion of the requests to the server for further handling purposes; in the broad reasonable interpretation, the Examiner further interprets the above as applying said data mining models and one or more rules so that the system is enabled to effect changes in the presentation interface (12310)]."

As mentioned above, FIG. 123 of Bowman-Amuah shows that the step **12310** of "Effecting Changes In The Presentation Interface" occurs at the client (see col. 248, lines 37-45). In Bowman-Amuah, it is the client that determines changes in the interface (such as navigation) based on user interactions. In contrast, in the Applicant's invention, as recited in Claim 17, the reverse is true. The server constructs the presentation based on decisions (including those made using the analytic engine) made at the server and then sends the presentation to the client.

As such, Bowman-Amuah does not teach or suggest that element of Claim 17 that recites: "wherein said means to generate applies said data mining model and said one or more rules to said customer attribute to produce an outcome for display in said presentation according to a format included in said presentation definition".

Tenth: The Applicant respectfully directs the Examiner to the recent decision by the Court of Appeals for the Federal Circuit in the *Net MoneyIn v. Verisign* (Fed. Cir. 2008) in which the test for anticipation under 35 U.S.C. 102 is reviewed. In particular, the court states the following at pages 14-16 of that decision:

"Section 102(a) provides that an issued patent is invalid if 'the invention [therein] was . . . described in a printed publication . . . before the invention thereof by the applicant.' Section 102 embodies the concept of novelty—if a device or process has been previously invented (and disclosed to the public), then it is not new, and therefore the claimed invention is 'anticipated' by the prior invention. As we have stated numerous times (language on which VeriSign relies), in order to demonstrate anticipation, the proponent must show 'that the four

corners of a single, prior art document describe every element of the claimed invention.' Xerox, 458 F.3d at 1322 (quoting *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000)). This statement embodies the requirement in section 102 that the anticipating invention be 'described in a printed publication,' and is, of course, unimpeachable. But it does not tell the whole story. Because the hallmark of anticipation is prior invention, the prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements 'arranged as in the claim.' *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)…The meaning of the expression 'arranged as in the claim' is readily understood in relation to claims drawn to things such as ingredients mixed in some claimed order. In such instances, a reference that discloses all of the claimed ingredients, but not in the order claimed, would not anticipate, because the reference would be missing any disclosure of the limitations of the claimed invention 'arranged as in the claim.' But the 'arranged as in the claim' requirement is not limited to such a narrow set of 'order of limitations' claims. Rather, our precedent informs that the 'arranged as in the claim' requirement applies to all claims and refers to the need for an anticipatory reference to show all of the limitations of the claims arranged or combined in the same way as recited in the claims, not merely in a particular order. The test is thus more accurately understood to mean 'arranged or combined in the same way as in the claim.'"

The Applicant respectfully submits that the Examiner has misapplied the test for anticipation under 35 U.S.C. 102. In addition to not teaching every element in Claim 17, the Applicant respectfully submits that Bowman-Amuah does not arrange or combine the various elements taught therein in the same way as recited in Claim 17. As such, the Applicant respectfully submits that the "broad reasonable interpretation" that the Examiner claims to have applied is not reasonable at all.

Summary:

For the above reasons, the Applicant respectfully submits that Bowman-Amuah does not teach or suggest the subject matter of Claim 17. As such, the Applicant submits that Claim 17 is patentable

over Bowman-Amuah. In addition, the Applicant submits that Claims 18-23, 25-28, 30-34, and 36, being dependent on Claim 17, and adding patentable features thereto, are also patentable.

For reasons similar to those given above with respect to Claim 17, the Applicant believes that Claim 37 is patentable. In addition, the Applicant believes that Claims 38-48, being dependent on Claim 37, and adding patentable features thereto, are also patentable.

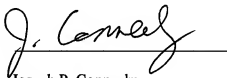No new matter has been entered by the above amendments (if any).

The Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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